

## PROFESSORSHIP OF CHEMISTRY (1968)

### DEPARTMENT OF CHEMISTRY

#### 1 The Professorship

##### Background

The Professorship of Chemistry (1968) was one of the first Professorships in theoretical chemistry to be established in the UK and prior to 1968 two distinguished professors of theoretical chemistry held Plummer Professorships in the Department: Sir John Lennard-Jones FRS (1932-1953), and H Christopher Longuet-Higgins FRS (1954-1967). The first holder of the 1968 Professorship was A David Buckingham CBE FRS, succeeded in 1997 by Jean-Pierre Hansen FRS, and most recently by Daan Frenkel ForMemRS who occupied the Professorship from 2007 until his retirement in 2017.

We seek a distinguished and energetic successor to carry on the work of these pioneers in the field of theoretical chemistry.

##### Selection Criteria

Candidates will be considered for the Professorship on the basis of the following selection criteria, which they should address in their application:

- The vision, leadership experience and enthusiasm to build on current strengths in maintaining and developing a leading research presence, and an established record in attracting research grant support to further this development. A track record of active involvement in interdisciplinary research and collaborations, including management of interdisciplinary grants and funding, would be an advantage.
- The ability to assist with academic planning and strategic development of theoretical chemistry in the University and, where appropriate, to facilitate its development within the UK.
- The ability to interact effectively with staff and students at all levels.
- An enthusiastic commitment to the recruitment, training and mentoring of the next generation of researchers, including undergraduates, research students, and postdoctoral research fellows.

Candidates will hold a PhD or equivalent postgraduate qualification.

## 2 The Department of Chemistry

The Department of Chemistry consists of a large number of strong individual research groups covering a very wide spectrum of science, centred on chemistry, but ranging from molecular biology to geophysics. The Department consists of over 70 academic staff, 110 support staff, 280 postgraduate students and 200 postdoctoral research workers, who are supported from central funds or by grants from Research Councils, the European Union, industry, charities or other sources.

Many of the academic staff have been awarded medals or prizes, and we have 12 Fellows of the Royal Society active in research. Our strength is recognised by the award of the highest rating of any UK Chemistry Department in the 2014 REF. The key features of our present success and future strategy are:

- The development of fundamental chemical understanding, with the emphasis on new structural, synthetic and theoretical techniques applicable in both academic and industrial contexts.
- Recruitment of the highest quality academic staff, encouraging all to develop independent research groups with the freedom to interact with other groups.
- Recruitment of the best possible PhD students and research staff from all over the world, and to foster an inclusive, rewarding and aspirational research culture.
- The pursuit of multidisciplinary collaborations, within the Department, with other departments in the University, and with external industrial and academic institutions.
- Updating and refurbishing our current building to provide the best possible environment for all our research activities.
- Securing sufficient public and private sector finance to underpin all our ambitious goals. Since 1997 the Department has been awarded over £100M from industry and various public sector initiatives for modernising and extending its research and teaching facilities.

Our multidisciplinary approach to chemistry research has been particularly fruitful, and has spawned a number of research centres, many of which are joint ventures with other Departments:

- The Lennard-Jones Centre for Computational Materials, a virtual institute bringing together researchers with common interests from a number of Departments.
- The Centre for Molecular Informatics, established in 1999, has become a world-leading unit within the Department for the development of techniques for molecular modelling, chemical informatics and for the analysis and interpretation of chemical data (with industry and a number of departments in the UK).
- The Centre for Atmospheric Science (with the Department of Applied Mathematics and Theoretical Physics, and the Department of Geography).
- The Melville Laboratory for Polymer Synthesis (predominantly with the Departments of Physics and Materials Science, but with a number of institutions around the world).

- The Pfizer Institute for Pharmaceutical Materials Science (with the Department of Materials Science).
- The Cambridge Crystallographic Data Centre (CCDC), , which is the depository of crystallographic and chemical information for all published X-ray and neutron structure determinations of organic and organometallic compounds (the Cambridge Structural Database).

Further details of all the Department's activities can be obtained from the Department's website (<http://www.ch.cam.ac.uk>).

### **3 Standard Duties**

#### **Teaching and research**

The Professor will be required to deliver lectures and give instruction in theoretical chemistry and in particular to perform the following duties:

- (i) to lecture, or hold classes, and to give at least 12 lectures or classes per year.
- (ii) to undertake original work, guide the supervision of research and advanced work in his/her subject and Faculty/Department, and to assist students in their studies by supervision or informal instruction.

#### **Examining**

The Professor will be required to undertake such university examining as may be required by the Head of Department.

#### **Supervision**

The Professor will be required to act as the supervisor of graduate students as and when requested.

#### **Administration**

Administrative duties are shared equitably among the teaching members of the Department. The Professors are expected to play significant roles from time to time on Departmental Committees and the Faculty Board dealing with such matters as academic and other staff appointments, admission of graduate students, research and teaching assessments, the libraries and computing arrangements. They are also encouraged to accept appointment to University Committees and to consider being involved in the senior leadership of the Department.

### **4 The Colleges**

The University, the Faculties and Departments, and the Colleges are linked in a complicated historical relationship that is mutually beneficial. Students (both graduate and undergraduate) are admitted by one of the 31 Colleges, although in the case of graduate students the Faculties and Departments determine admissions

before the Colleges are involved. Almost all undergraduates, and many graduate students, live in a College. The teaching of undergraduate students is shared between the Colleges and the Faculties and Departments, with the Colleges arranging small group teaching (“supervision”) and the Departments providing lecturing, laboratory classes, and advanced supervisions. Most academic staff will also be invited to join a College as a teaching or professorial fellow. College teaching is remunerated separately from the University teaching, and appointment to a College is a separate matter from a University appointment. Membership of a College adds an important social and intellectual dimension for many of the academic staff. The Chair of the Faculty/Head of Department or senior colleagues can give more advice.

The Scheme for newly-appointed University Officers seeking a College Fellowship is set out at:

<https://www.ois.cam.ac.uk/uto-scheme/guidance-for-applicants/view>

## **5 Procedure for Appointment**

The appointment will be made by a Board of Electors, chaired by the Vice-Chancellor or his Deputy, and constituted by members of the Department, members of cognate Departments and external experts.

All applications will be acknowledged. The Board of Electors will decide how they wish to proceed towards making an election, which may include interviews and/or presentations. Short-listed candidates may be invited to visit the Department to give a seminar on their work and meet prospective colleagues in the course of the process.

Candidates will be informed of the progress of their applications as agreed by the Electors.

It is anticipated that the successful candidate will take up the appointment on 1 October 2019 or as soon as possible thereafter.

## **6 Enquiries and Applications**

Informal enquiries about this Professorship may be directed to Professor John Pyle CBE FRS, former Head of the Department of Chemistry (telephone +44 (0)1223 336473, email: [jap12@cam.ac.uk](mailto:jap12@cam.ac.uk)) or to Professor David Wales, Chair of the Theory Group, (tel: +44 (0)1223 336343, email: [dw34@cam.ac.uk](mailto:dw34@cam.ac.uk))

Further information on the University is available at the following address:  
[www.cam.ac.uk](http://www.cam.ac.uk).

Applications, consisting of a letter of application together with a statement of current and future research plans, a curriculum vitae and a publications list, along with details of three referees should be made online no later than 28 February 2019.

If you are unable to apply online, please contact the Human Resources, University Offices, The Old Schools, Cambridge, CB2 1TT (email [ibise@admin.cam.ac.uk](mailto:ibise@admin.cam.ac.uk)).

## GENERAL INFORMATION

All appointments to University Offices are subject to the Statutes and Ordinances of the University.

### A Salary

Salary on appointment will be determined by the Vice-Chancellor at the appropriate point on the University's salary spine for grade 12, taking account of the criteria for the respective contribution band. Professorial salaries are reviewed periodically, on the basis of research, teaching and general contribution, by the Vice-Chancellor with the assistance of a small Advisory Committee.

There is a normal sabbatical entitlement of one term in seven on full pay, subject to the University regulations.

### B Headship of the Department

Should a Professor be appointed to the Headship of a Department, a pensionable payment in addition to salary is made.

### C Recruitment Incentive

The University has a scheme whereby a single recruitment incentive payment may be made on appointment at the Vice-Chancellor's discretion.

### D Removal Expenses

If the person appointed is not resident in Cambridge, a contribution from University funds towards expenditure incurred in removal to Cambridge to take up a University office will be made.

### E Consultancy Work

The University's policy on consultancy work is that consultancy arrangements must be entered into privately between the employee and the organisation concerned. The consultancy work must not interfere with the duties required of the officer under the officer's contract of employment with the University. Consultancy work is not covered by the University's insurances, even when the University has knowledge that such work is being done. The University must not be regarded as being directly or indirectly involved in any consultancy arrangement through the use of University letterheads, advice given or work done in the individual's capacity as an employee of the University. Individuals undertaking private or consultancy work are advised to take out personal insurance.

Alternatively, professional indemnity cover may be obtained by channelling private work through the University company Cambridge Enterprise Ltd. Anyone wishing to do so should, in the first instance, contact Cambridge Enterprise at [www.enterprise.cam.ac.uk](http://www.enterprise.cam.ac.uk).

### F Professorial Fellowships

The great majority of Professors at Cambridge hold a professorial fellowship of a college. Although election to a fellowship is a matter for an individual college, the University takes active steps to draw to the attention of Heads of House the names of those Professors eligible for election. The Scheme for newly-appointed University Officers seeking a College Fellowship is set out at: <https://www.ois.cam.ac.uk/uto-scheme/guidance-for-applicants/view>

In seeking the views of referees, their permission will be sought for the release of their comments on the successful candidate if it were to be requested by the professorial fellowship electors of a college.

#### **G Health screening on appointment to University Office and in the case of University Officers undertaking a change of duties**

Offers of appointment made to prospective University officers whose work will fall within certain categories are conditional on the completion of a medical questionnaire and, if necessary, on a satisfactory health check by the Occupational Health Service.

Only the person elected will be asked to complete the questionnaire at the time of election.

#### **H Family friendly policies and benefits**

The University has a range of family friendly policies to aid employee's work-life balance including maternity, paternity and parental leave, flexible working and career break schemes. In addition, childcare vouchers, access to two nurseries and a holiday play scheme are available through the Childcare Office to help support University employees with childcare responsibilities. Further information can be found at:

<http://www.admin.cam.ac.uk/offices/hr/staff/benefits/family.html>

#### **I Eligibility to work and reside in the UK**

UK immigration procedures stipulate that an employer may not consider the appointment of any person unless they have seen evidence of their immigration status. Accordingly, shortlisted candidates, whatever their nationality, will be asked to provide such evidence at an appropriate stage in the recruitment procedure.

#### **J Equal Opportunities Information**

The University of Cambridge appoints solely on merit. No applicant for an appointment in the University, or member of staff once appointed, will be treated less favourably than another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

#### **K Information if you have a Disability**

The University welcomes applications from individuals with disabilities. Our recruitment and selection procedures follow best practice and comply with disability legislation.

The University is committed to ensuring that applicants with disabilities receive fair treatment throughout the recruitment process. Adjustments will be made, wherever reasonable to do so, to enable applicants to compete to the best of their ability and, if successful, to assist them during their employment. We encourage applicants to declare their disabilities in order that any special arrangements, particularly for the selection process, can be accommodated. Applicants or employees can declare a disability at any time.

Applicants wishing to discuss with or inform the University of any special arrangements connected with their disability can, at any point in the recruitment process, contact, Dr Gosia Wloszycka, who is responsible for the administration of the recruitment process for this position, by email on [mw425@admin.cam.ac.uk](mailto:mw425@admin.cam.ac.uk)